

# Silvopastural Systems: A New Idea in Multiple-Use Management

Photo by Dana McReynolds

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Perhaps the emphasis of multiple-use management is redundant. We keep hearing the importance of diversifying land management activities for the benefit of both the landowners and the environment. The Alabama Forestry Commission and the

Alabama TREASURE Forest Association encourage forest landowners to diversify their land management practices. There is even an award, the Helene Mosley Memorial TREASURE Forest Award that is recognized statewide for outstanding landowners that continually

manage their land through these practices. Other agencies and universities are also stressing the same concept but to a broader range of landowners.

For the landowners that own pastureland or cropland, the multiple-use management regime for this type is "agroforestry." Agroforestry encompasses a broad range of land development practices. It is the general idea of diversifying land management activities on the same acreage simultaneously to increase economic return while meeting environmental goals. This practice can incorporate timber management with cropland or pastureland. To be more specific, however, there is a particular agroforestry system that entails the management of timber production with pastureland only and that is "silvopasture." Silvopasture integrates trees with livestock grazing and forage production. It is currently the most rapidly growing and most common form of agroforestry in the South.

The silvopastural system can be developed from a pasture with the incorporation of trees or from a forest with the incorporation of forage. Why is there such an emphasis for landowners to incorporate a silvopastural system? As mentioned earlier, there are many benefits both economically and environmentally for landowners to diversify their management activities.



Photo by Dana McReynolds

*Elliott Salter's goats happily greet him at their trough as he prepares to treat them with supplemental feed.*



Economically, the landowner increases the potential of receiving a return not only periodically but annually as well. Especially for landowners that own small acreages, livestock management can enhance annual cash flow that may be limited in timber production. Another important reason to diversify management activity is to provide financial stability in an unstable economy. Livestock and timber prices constantly fluctuate, but not necessarily in the same direction at the same time. There may be an economic period where timber prices are low while livestock prices are high or vice versa. Management diversity will compensate for these fluctuations.

Environmentally, a silvopastoral system may reduce excessive erosion and understory vegetation. If understory vegetation is reduced, there will be little need for prescribed burns and herbicide treatments. In an improved pasture where fertilizer is applied, not only will the forage benefit from this practice, so will the trees. Both the trees and the forage will experience accelerated growth. Eventually, this repetitive management activity will provide high-quality forage yields and timber products.

Under certain management regimes, a silvopastoral system and a wildlife habitat can co-exist in a healthy environment. Even though livestock and wildlife management seem to overlap and compete



Photo by Dana McReynolds

*Great Pyrenees dogs guard the goats for Rosalind Peoples at her Fayette County farm.*

with one another, in certain systems wildlife management is enhanced. With large edges and many openings that are characteristic of most silvopastoral systems, the land may actually be more conducive to wildlife than the traditional forest or pasture.

In a silvopastoral system, livestock can include horses, goats, cattle, or sheep; but in the south, cattle - along with southern pines - is the most common. However, with the new emergence of immigrants and the increased demand for goat products, many southern landowners are converting their silvopas-

tural system from cattle and pine to goat and timber. Three landowners from different areas in Alabama at different stages of management give their personal account about their goat and timber silvopastoral system.

## *The Peoples*

Grady and Rosalind Peoples of Fayette County had forestland predominantly, but recently decided to convert it into a silvopastoral system. In July of

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*Left: Doris Smith with her prize-winning Billy, a purebred Boer, at "Lower Forty Farms." Right: The play area Mrs. Smith set up for her goats with the natural upland hardwood forest in the background.*

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2001, they integrated goats with timber. They cleared approximately 12 acres of underbrush and established both permanent and electrical fencing; however, there is still a variety of understory vegetation and kudzu on their land.

Mr. and Mrs. Peoples purchased several purebred and mixed-bred Boer goats and placed them on their property. Immediately, the goats began to clean up the brush by browsing on the forage and the kudzu. Rosalind Peoples stated, "The goats absolutely love the kudzu and it's high in protein. Since the goats are eating the underbrush and the kudzu, herbicides are not needed to control such unwanted species." Also, expenses are decreased since money is not spent for herbaceous spraying or prescribed burns.

Although still in the early stages of managing their silvopastural system, the Peoples are already receiving income from their practices. They receive income from selling Great Pyrenees guard dogs (used as shepherd dogs for flocks) as well as from selling their Boer goats. Even though they have been managing their land for over a year, Mrs. Peoples said that they are still making improvements on their property. They plan to develop an old spring providing better water access for the goats and to enclose 20 more acres of land. With persistence, soon the Peoples will have a well-accomplished silvopastural system.

## The Salters

Elliott Salter from Crenshaw County is currently establishing a silvopastural system from his forestland. He definitely believes in management diversity since he is a prospective TREASURE Forest landowner. Mr. Salter's property consists of several pine plantations, some planted under the Conservation Reserve Program (CRP) and some planted under the Forestry Incentive Program (FIP), commonly known as the "Cost Share" program. He has applied to be a participant in another program, the "Silvopasture

Study" sponsored by Alabama A&M University.

Already having five acres enclosed with electrical and permanent fencing, he plans to enclose three more acres. Mr. Salter has started establishing his silvopastural system by purchasing a few goats and he plans to continue his progress by purchasing more purebred goats. The goats can graze in the pasture



or in his natural stand, but not in the CRP or FIP pine plantations. He does not want the goats to consume any vegetation that was treated with herbicides. The goats can "clean up" the underbrush in the forest to the point where burning and herbicides will not be needed.

## The Smiths

Landowner Doris Smith of Marengo County has established her silvopastural system quite differently. The Smiths own pastureland with native trees. They converted their livestock management

approximately seven years ago when they sold their cattle and purchased five goats. Mrs. Smith was the first landowner in her area to manage a goat and timber silvopastural system. She has been an innovator and an advocate for this type of management practice.

Mrs. Smith admitted that she knows more about raising goats than she does about timber management, and most of this knowledge comes from personal experience. Even though there is little timber management being done, there does exist a beautiful stand of natural upland hardwoods. The goats graze in the pasture near the house and on the forage in the forest. The goats really prefer to graze "up" as opposed to grazing in the pasture because they are really browsers. She stated that the goats really love the honeysuckle and the acorns that exist in the forest. With the upland hardwoods being such a great habitat for wildlife, do the goats compete with the wildlife for food? "Not at all," said Mrs. Smith, "there is enough forage for both the goats and the wildlife." Besides, the goats have two other food sources, one from the pasture and another from the feed. Competing for space is not a problem either. Few confrontations occur between the domesticated goats and the existing wildlife since the guard dogs are there to ward off any potential predators.

Doris Smith absolutely loves her work and it is reflected in her accomplishments. Not only is she persistently working, she is also informing and educating other landowners about the goat and timber silvopastural system. As an innovator in this field, she wants to continue teaching others about raising goats and has done so through her presentations at several goat workshops. With her experience, knowledge, and direction, other landowners will establish and eventually accomplish a silvopastural system as successful as hers. ♀